

FOOD VALUE CHART

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In this chart, the protein, minerals, and vitamins are expressed in percentages of the amount recommended for an active man as furnished by the amount of food stated (usually one serving). We have grouped similar kinds of foods together in the chart, i.e. 1) milk and dairy products, 2) meat, poultry, fish, and other protein rich foods, 3) vegetables and fruits, 4) bread and cereals, 5) fats and oils, and 6) miscellaneous. The groups of protective foods which should be included regularly in the diet are listed first. Subgroups of dark green and yellow vegetables, citrus fruits and other foods high in ascorbic acid, and other vegetables and fruits are given. With group 4, bread, cereals, and flours, we have included some unenriched products as well as enriched and whole grain products, so that the food values of these may be compared. Similarly, in group 5, values are included for fats and oils which contain no vitamin A, as well as for butter and fortified margarine. Within each group of foods, figures for the nutrient most often associated with the group are arranged in descending order, i.e. items in the group of green and yellow vegetables are arranged in order of vitamin A value; items in the groups of citrus fruits and other vegetables and fruits are arranged in order of ascorbic acid content.

Since no two foods have identical values, the figures chosen for each group of foods may not fit equally well all items included in the group. Some of the differences in the nutritive values of foods are caused by variety, methods of storage, growing conditions, and preparation. Therefore, any table of average food values indicates only the approximate amount of each nutrient you may expect to obtain from a serving of the food.

With the help of this chart you can 1) learn the special values of each group of foods, 2) select good sources of a given nutrient, and 3) estimate roughly the amounts of various nutrients in a diet to compare with the recommended dietary allowances as listed in table 1.

To learn the special values of a group of foods: Find the food group in the left hand column. Read across the page. Figures representing important sources of each nutrient are printed in bold face type. Thus in the group of green and yellow vegetables, carrots, winter squash, and pumpkin are good sources of vitamin A value and contribute relatively little of other nutrients, whereas the cooked leafy greens are good sources not only of vitamin A value but of iron, vitamin C, and riboflavin also.

Used in this way, the chart should help you to see that the foods in each group are similar in their important contributions although they vary appreciably in food value. If you know the relative nutritive values of various foods, you need not adhere too closely to a rule of thumb such as the Basic 7, or the four food group plan, but will be able to substitute intelligently when there are shortages or surpluses of certain food groups.

NEW YORK STATE COLLEGE OF HOME ECONOMICS

A unit of the State University of New York at Cornell University



NUTRITIVE VALUE OF

Foods	Amount	Food Energy Calories
I. Milk and Dairy Products		<i>Num.</i>
Milk, whole, pasteurized.	1 cup	165
Milk, skimmed, Buttermilk	1 cup	90
Cheese, American Cheddar	1 ounce	115
Cheese, cottage	3½ ounces, scant ½ cup	100
Ice Cream, vanilla	1/2 cup	150
Cream, light.	1/4 cup	120
Cream, heavy.	1/4 cup	200
II. Meats and Other Protein Rich Foods		
Meats and Poultry (weighed without bone)		
Beef, Lamb, Veal, Poultry	3 ounces, cooked	150
Pork.	3 ounces, cooked	300
Liver	3 ounces, weighed before cooking	300
Heart	3 ounces, weighed before cooking	120
Tongue, medium fat.	3 ounces, weighed before cooking	100
		175
Fish		
Low fat, e.g. Cod and Haddock	3 ounces, cooked	80
Medium fat, e.g. Halibut	3 ounces, cooked	125
High fat, e.g. Salmon ^c and Tuna . . .	3 ounces, cooked	150
Oysters	1/2 cup	100
Eggs	One, medium	75
Dry Beans and Peas, Nuts		
Beans, Peas	1 ounce dry, ½ cup cooked	100
Nuts (including Peanuts and Peanut Butter).	1 ounce (1/4 cup) or 2 tablespoons peanut butter	200
III. Vegetables and Fruits		
Dark Green and Yellow Vegetables		
Sweet Potato	1 medium, baked	185
Cooked Greens, e.g. Beet Greens, Chard, Kale, Spinach.	3 ounces, 1/2 cup	25
Carrots, Winter Squash, Pumpkin . . .	3 ounces, 1/2 cup	25
Broccoli	2½ ounces, 1/2 cup	25
Salad Greens, raw, e.g. Escarole, Endive.	2 ounces, 1 serving	10
Green Asparagus, Green Snap Beans.	2½ ounces, 1/2 cup	15
Peas, cooked.	2½ ounces, 1/2 cup	55
Green Peppers, raw.	2 ounces, 1 medium	15
Citrus Fruits, and Other Foods High in Ascorbic Acid		
Grapefruit, Orange, Lemon, or Strawberries, juice or pulp	1/2 cup, 1 serving	50

ME COMMON FOODS^a

Protein	Minerals		Vitamins				
	Calcium	Iron	Vitamin A	Thiamine	Riboflavin	Ascorbic Acid	

Percentage of the amount recommended for a normally active man per day^b

Per cent	Per cent	Per cent	Per cent	Per cent	Per cent	Per cent	
13	36	2	8	6	23	4	
13	36	2	—	6	24	4	
10	26	3	8	—	7	—	
30	12	3	—	—	18	—	
4	10	—	6	—	8	—	
3	8	—	10	—	5	—	
—	6	—	15	—	5	—	
30	—	25	—	6	10	—	
30	—	25	—	35	10	—	
25	—	60	600	10	140	20	
20	—	40	—	25	40	—	
20	—	25	—	6	15	—	
25	—	6	—	3	6	—	
25	—	6	—	3	6	—	
25	3 ^c	10	3 ^c	3	6	—	
20	15	65	6	10	15	—	
10	3	13	10	3	10	—	
10	3	15	—	6	3	—	
6	3	6	—	6	3	—	
3	6	10	200	6	6	35	
3	— ^d	20	150	3	10	35	
3	3	6	150	3	3	6	
3	10	10	50	3	6	70	
—	3	10	35	3	3	10	
3	3	6	10	6	6	15	
6	3	15	10	15	6	15	
—	—	3	10	—	3	100	
3	3	3	3	3	3	70	

Cantaloupe	1/4 melon, 5" in diam.	20
Cabbage, raw	2 ounces, 1/2 cup shredded	10
Brussel Sprouts, cooked Cabbage, Cauliflower ^e	2½ ounces, 1/2 cup	25
Blackberries, Blueberries, Raspberries, raw	3½ ounces, 3/4 cup	60
Tomatoes	4 ounces, 1/2 cup	25
Other Vegetables		
Potatoes, Irish	4½ ounces, 1 medium	105
Rutabagas, Turnips	2½ ounces, 1/2 cup	20
Green Lima Beans	2½ ounces, 1/2 cup	75
Corn, Sweet, canned	4 ounces, 1/2 cup	85
Eggplant, Summer Squash	3½ ounces, 1/2 cup	20
Beets, Parsnips, Onions	3 ounces, 1/2 cup	35
Cucumber, Head Lettuce	2 ounces, 1 serving	5
Other Fruits		
Avocados	4 ounces, 1/2 medium	280
Pineapple, fresh	2½ ounces, 1/2 cup, cubed	35
Pineapple, canned	1 large slice with juice	95
Bananas	One	90
Apricots, Peaches, raw	3 apricots or 1 med. peach	50
Apples, Cherries, Pears, Plums, raw . .	1 cup, sliced	100
Rhubarb or Cranberry Sauce, sweetened	1/2 cup	225
Apricots, dried, cooked, and sweetened	1/2 cup	200
Grapes, Grape Juice	1 cup fruit, 1/2 cup juice	85
Dates, Figs, Prunes ^e , Raisins	1 ounce dry, 1 serving	90
IV. Breads, Cereals, and Flours		
Bread, whole wheat or enriched	1 slice	65
Flour, enriched or whole wheat	1 cup	400
Flour, white, unenriched	1 cup	400
Whole grain breakfast Cereals, converted or brown Rice	1 ounce dry or ¾ cup cooked	100
Cornmeal, Crackers, Farina, Macaroni, Noodles, Rice, Spaghetti f	1 ounce dry or ¾ cup cooked	100
V. Fats and Oils		
Butter, Fortified Margarine	1 tablespoon	100
Cooking Fats, Salad Oils	1 tablespoon	115
Mayonnaise	1 tablespoon	100
Bacon, broiled	1/2 ounce, 2 strips	100
Raw Bacon, Salt Pork, Fatback	1 ounce	180
VI. Sugar, Molasses, and Chocolate		
White Sugar	1 cup	770
Molasses, medium dark	1 cup	760
Chocolate, unsweetened	1 ounce	140

^a The figures in this chart have been adapted from those in "The Composition of Foods," of the nutrient.

^b The amounts recommended for a 25-year-old man, i.e. values equal to 100 per cent in this 1.6 mg. thiamine (vitamin B₁), 1.8 mg. riboflavin, and 75 mg. ascorbic acid (vitamin C).

^c If soft bones are eaten, calcium value is higher than is indicated. Red salmon is higher.

^d Dark green leaves all contain calcium but in some cases this is not available. Consult a

^e Any of the vegetables in this group which are green would have more vitamin A value than of the amount recommended for a normally active man per day.

^f Some of these foods may be enriched; if they are, the label on the package will include the

20	-	3	3	60	3	3	40
10	-	3	3	-	3	3	35
25	3	3	6	3 ^e	3	3	35
60	3	3	10	3	3	3	30
25	-	3	6	20	3	3	25
	3	3	10	-	10	3	20
05	-	6	3	3	3	3	20
20	6	3	15	6	6	3	15
75	3	-	6	6	3	3	10
85	-	-	3	3	3	3	10
20	-	3	6	-	-	3	6
35	-	-	3	3	-	3	6
5							
	3	-	6	6	3	10	25
80	-	-	3	3	3	-	20
35	-	3	6	3	6	-	15
95	3	-	6	10	3	3	15
90	-	-	6	20	3	3	10
50	3	3	6	3	6	3	10
00	-	-	3	-	-	-	6
25	3	6	20	70	-	3	6
00	-	-	6	-	3	3	3
85	-	3	10	- ^e	3	-	-
90							
	3	3	4	-	4	3	-
65	17	3	32	-	30	16	-
00	17	-	10	-	3	3	-
	4	-	10	-	6	3	-
00	4	-	3 ^f	-	3 ^f	- ^f	-
	-	-	-	10	-	-	-
00	0	0	0	0	0	0	0
15	-	-	-	-	-	-	-
00	6	-	5	0	6	3	0
00	3	-	3	0	6	3	0
80							
	0	0	-	0	0	0	0
70	-	120	200	0	-	-	0
60	3	-	10	-	-	3	0
40							

re Handbook No. 8, U.S.D.A. A dash in the column indicates only a trace

re: 70 gm. protein, 0.8 gm. calcium, 10 mg. iron, 5000 I.U. vitamin A,

A than the other fish in this group.

ailed table of food values for specific greens.

ed, and the vitamin A value of a serving of prunes would be about 10%

nation.

To select good sources of a given nutrient: Find the nutrient at the top of the column. Read downward, noting food groups for which the figures are relatively large, especially the figures in bold face type. Thus you will see that fruits and vegetables are our chief sources of vitamin C, and that other foods provide little or none. If citrus fruits and tomatoes are scarce or expensive, a good selection of other fruits and vegetables will meet the need for this vitamin.

To estimate roughly the amounts of various nutrients in a diet: Write down, as accurately as you can, the amounts of various foods eaten in a day by the family member about whose diet you are particularly concerned. To save time in calculating, add together all like items, such as the number of slices of bread or number of cups of milk. Using the figures in the chart, calculate the approximate values for each kind of food. For example, if a 5-year-old child has had 3 cups of milk in the day, write down 39 under protein, 108 under calcium, 6 under iron, 24 under vitamin A, 18 under thiamine, 69 under riboflavin, and 12 under ascorbic acid. When you have calculated all the food items eaten in one day by the particular person concerned, compare the totals for one day with figures in table 1, which represent the appropriate allowances. Thus, to meet the allowances for a 5-year-old child, protein should total at least 71, calcium 125, iron 80, and so on. A daily average for foods eaten on several days will give you a better idea of the nutritive value of the diet than will figures for one day only.

We did not express the calorie values of the foods as percentages of the recommended allowances because the caloric needs of individuals vary so greatly with their size and activity. The easiest way to judge whether or not you are getting enough calories, provided the rest of the diet is adequate, is to observe your body weight. If a normal person eats more calories than he needs, the excess will be deposited as body fat; if too few calories are eaten, he will not have enough body fat for good health. Calorie intake is adequate for children if they are growing normally.

Even though we recognize that the calorie values of products such as pies and cakes vary widely depending on the ingredients used, an approximate figure for some of the higher calorie dishes is often useful. Following are a few examples: ¹

FOOD	AMOUNT	CALORIES
Meat or cheese sandwich	2 slices of bread	200-300
Pie	1/7 of a 9-inch pie	250-400
Jams or jellies	1 tablespoon	50
Candy	1 ounce	100-150
Carbonated beverage	7-ounce bottle	95
Butter cake, frosted	1 2-inch square	250-350
Sponge or angel cake, unfrosted	1 serving	125
Pudding such as cornstarch, tapioca, etc.	1/2 cup	200

¹ For more detailed information consult: Food Values in Common Portions. U.S.D.A., Bureau of Human Nutrition and Home Economics, Washington, D. C. April 1951.

Table 1. The Score, or Percentage, Recommended for Each Member of the Family

Age	Weight	Height	Protein	Minerals		Vitamins			
				Calcium	Iron	A	Thiamine*	Riboflavin	Ascorbic Acid
Men*	lb.	in.							
25	154	69	100	100	100	100	100	100	100
45	154	69	100	100	100	100	94	100	100
65	154	69	100	100	100	100	81	100	100
Women*									
25	128	64	83	100	120	100	75	83	94
45	128	64	83	100	120	100	69	83	94
65	128	64	83	100	120	100	63	83	94
Pregnant (second half)			111	188	150	120	81	111	133
Nursing (28¾ fl. oz.)			140	250	150	160	106	139	200
Children up to 12 yrs.†									
1-3	27	34	57	125	70	40	38	56	47
4-6	40	43	71	125	80	50	56	72	67
7-9	59	51	86	125	100	70	69	83	80
10-12	79	57	100	150	120	90	81	100	100
Boys†									
13-15	108	64	121	175	150	100	100	117	120
16-19	139	69	143	175	150	100	112	139	133
Girls†									
13-15	108	63	114	163	150	100	81	111	107
16-19	119	64	107	163	150	100	75	106	107

* Allowances are for normally active adults of the height, weight, and age stated. Since thiamine allowances vary with food energy needs, thiamine allowances for young adults may be generous for the "white-collar" worker.

† In this table, allowances for infants have been omitted. Allowances for children are based on the needs for the middle year in each group (as 2, 5, 8, etc.) and are for moderate activity and for the height and weight stated.

To compare the recommended allowances for various family members: In table 1, recommended allowances for protein, minerals, and vitamins are expressed in percentages of the amount recommended (table 2) for a normally active 25-year-old man, 5 feet 9 inches tall, weighing 154 pounds², and living in a temperate climate. The diet of such a man meets the recommended allowances for the nutrients listed if it scores 100 or more for protein, 100 or more for each mineral and vitamin, and supplies enough calories to maintain a satisfactory weight.

Look down the column under each nutrient, and compare the figures given for various family members. Note, for example, that protein allowances for adolescent boys and girls are greater than the father's protein allowance, and that the mother, when she is pregnant or nursing a baby, needs more calcium than any other family member.

² For further description of the activity of this "reference" man, consult Recommended Dietary Allowances, revised 1958, NAS-NRC Publication No. 589.

**Table 2. Dietary Allowances*, Revised 1958 by the
Food and Nutrition Board, National Research Council
to Maintain Good Nutrition of Healthy Persons in the U.S.A.**

(Allowances are intended for persons normally active in a temperate climate)

Age	Weight	Height	Food Energy Calories†	Protein	Minerals		Vitamins			
					Cal- cium	Iron	A	Thia- mine	Ribo- flavin	Ascor- bic Acid
	lb.	in.		gm.	gm.	mg.	I.U.	mg.	mg.	mg.
Men										
25	154	69	3200†	70	0.8	10	5000	1.6	1.8	75
45	154	69	3000	70	0.8	10	5000	1.5	1.8	75
65	154	69	2550	70	0.8	10	5000	1.3	1.8	75
Women										
25	128	64	2300†	58	0.8	12	5000	1.2	1.5	70
45	128	64	2200	58	0.8	12	5000	1.1	1.5	70
65	128	64	1800	58	0.8	12	5000	1.0	1.5	70
Pregnant (second half)			+300	+20	1.5	15	6000	1.3	2.0	100
Nursing (28¾ fl. oz. daily)			+1000	+40	2.0	15	8000	1.7	2.5	150
Children up to 12 yrs.‡										
1-3	27	34	1300	40	1.0	7	2000	0.7	1.0	35
4-6	40	45	1700	50	1.0	8	2500	0.9	1.3	50
7-9	59	51	2100	60	1.0	10	3500	1.1	1.5	60
10-12	79	57	2500	70	1.2	12	4500	1.3	1.8	75
Boys‡										
13-15	108	64	3100	85	1.4	15	5000	1.6	2.1	90
16-19	159	69	3600	100	1.4	15	5000	1.8	2.5	100
Girls‡										
13-15	108	63	2600	80	1.3	15	5000	1.3	2.0	80
16-19	119	64	2400	75	1.3	15	5000	1.2	1.9	80

* The recommended allowances for nutrients not included in this Food Value Chart have been omitted. The allowance levels are intended to cover individual variations among most normal persons as they live in the United States under usual environmental stresses. The recommended allowances can be attained with a variety of common foods which provide other nutrients for which human requirements have been less well defined.

† Calorie allowances apply to individuals usually engaged in moderate physical activity. For office workers or others in sedentary occupations they are excessive. Adjustments must be made for variations in body size, age, physical activity, and environmental temperature.

‡ In this table, allowances for infants have been omitted. Allowances for children are based on the needs for the middle year in each group (as 2, 5, 8, etc.) and are for moderate activity and for the height and weight stated.

Niacin has been omitted from the Food Value Chart and from tables 1 and 2, because a liberal intake of good quality proteins will make up for a lack of niacin in the diet. Vitamin D has been omitted since it may be obtained from exposure to sunshine as well as from food.

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